

U.S. Application No. 10/671,718

RECEIVED
CENTRAL FAX CENTER

AUG 02 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A document search method for finding a document relevant to a search condition from object documents as search objects, comprising the steps of:

acquiring a seed text which is inputted as the search condition;

partitioning the object document into a plurality of blocks;

calculating similarity of each block of the object document to the seed text;

judging whether or not the calculated similarity of each block satisfies a predetermined condition;

calculating a similarity of the object document as a whole to the seed text,
based on the calculated similarity of each block to the seed text;

calculating, as an inclusion degree, a ratio of blocks that are judged as satisfying said predetermined condition to the whole of the plurality of blocks of the object document; and

outputting a list of information of object documents in association with the inclusion degree of each listed object document and with the similarity of each listed object document as a whole to the seed text.

2. (canceled)

U.S. Application No. 10/671,718

3. (currently amended) A document search device for finding a relevant document from object documents as search objects, comprising:

a seed text acquisition module which acquires a seed text as a search condition;

a partitioning module which partitions the object document into a plurality of blocks;

a similarity calculation module which calculates similarity of each block of the object document to the seed text;

an inclusion degree calculation module which judges whether the calculated similarity of each block satisfies a first predetermined ~~condition~~ condition; calculates a similarity of the object document as a whole to the seed text, based on the calculated similarity of each block to the seed text; and calculates, as an inclusion degree, a ratio of blocks that are judged as satisfying the first predetermined condition to the whole of the plurality of blocks of the object document; and

an output module which outputs a list of information of object documents in association with the inclusion degree of each listed object document and with the similarity of each listed object document as a whole to the seed text.

4. (previously presented) The document search device according to claim 3, further comprising:

a full-text search condition acquisition module which acquires a full-text search condition to be used for a full-text search of the object documents;

a full-text search condition analysis module which analyzes the acquired full-text search condition; and

U.S. Application No. 10/671,718

a full-text search condition relevancy calculation module which, based on the analyzed full-text search condition, calculates, as a full-text search condition relevancy, a ratio of a number of relevant min terms satisfied by characteristic strings of said each block to a number of total min terms included in the full-text search condition, wherein: the inclusion degree calculation module judges whether or not the calculated similarity satisfies the first predetermined condition and whether or not the calculated full-text search condition relevancy satisfies a second predetermined condition, and calculates, as the inclusion degree, a ratio of blocks that are judged to satisfy the first and second predetermined conditions to the whole of the object document.

5. (canceled)

6. (currently amended) A computer-readable record medium storing a program for instructing a computer to execute a relevant document search method for finding a relevant document from object documents as search objects, wherein the relevant document search method comprises the steps of:

acquiring a seed text as a search condition for searching the object documents;

partitioning the object document into a plurality of blocks;

calculating similarity of each block of the object document to the seed text;

judging whether or not the calculated similarity of each block satisfies a predetermined condition;

calculating a similarity of the object document as a whole to the seed text,
based on the calculated similarity of each block to the seed text;

U.S. Application No. 10/671,718

calculating, as an inclusion degree, a ratio of blocks that are judged to satisfy said predetermined condition to the whole of the plurality of blocks of the object-text document; and

outputting a list of information of object documents in association with the inclusion degree of each listed document and with the similarity of each listed object document as a whole to the seed text.

7. (currently amended) A document relevancy judgment method for judging relevancy of a previously stored object document to a seed text as a search condition, comprising the steps of:

partitioning the object document into a plurality of blocks;

calculating similarity of each block of the object document to the seed text;

judging whether or not the calculated similarity of each block satisfies a first predetermined condition;

calculating a similarity of the object document as a whole to the seed text, based on the calculated similarity of each block to the seed text;

calculating, as an inclusion degree, a ratio of blocks that are judged to satisfy said first predetermined condition to the whole of the plurality of blocks of the object document; and

outputting a list of information of object documents in association with the inclusion degree of each listed object document and with the similarity of each listed object document as a whole to the seed text.

8. (canceled)

U.S. Application No. 10/671,718

9. (previously presented) The document relevancy judgment method according to claim 7, further comprising the steps of:

acquiring a full-text search condition for a full-text search of the object document;

calculating, as a full text search condition relevancy, a ratio of a number of relevant min terms satisfied by characteristic strings of said each block to a number of total min terms included in the full-text search condition; and

judging whether or not the calculated similarity satisfies the first predetermined condition and whether or not the calculated full-text search condition relevancy satisfies a second predetermined condition, and calculates, as the inclusion degree, a ratio of blocks that are judged to satisfy the first and second predetermined conditions to the whole of the object document.

10. (currently amended) A relevant document search method for finding a document from object documents as search objects, comprising the steps of:

acquiring a full-text search condition which is inputted as a search condition;

partitioning the object document into a plurality of blocks;

calculating similarity of each block of the object document to the full-text search condition;

judging whether or not the calculated similarity of each block satisfies a predetermined condition;

calculating a similarity of the object document as a whole to the full-text search condition, based on the calculated similarity to the full-text search condition;

U.S. Application No. 10/671,718

calculating, as an inclusion degree, a ratio of blocks that are judged as satisfying said predetermined condition to the whole of the plurality of blocks of the object document; and

outputting a list of information of object documents in association with the inclusion degree of each listed object document and with the similarity of each listed object document as a whole to the full-text search condition.

11. (canceled)

12. (original) The document search method according to claim 1, further comprising the steps of:

extracting character strings from the acquired seed text; and
extracting character strings from each block of the object document, wherein:
the similarity of each block of the object document to the seed text is
calculated by comparing the character strings extracted from each block with the
character strings extracted from the seed text.

13. (currently amended) The document search method according to claim 12, further comprising the steps of:

regarding each block as a relevant block to the seed text if-in response to the
calculated similarity of the block is-being higher than a preset value;
counting the number of blocks judged as the relevant blocks; and
storing the counted number of relevant blocks.

U.S. Application No. 10/671,718

14. (previously presented) The document search method according to claim 13, wherein the total number of blocks included in the object document is calculated, and the inclusion degree is calculated from a ratio of the calculated total number of blocks to the stored counted number of relevant blocks.

15. (currently amended) The document search device according to claim 4, further comprising a characteristic string extraction module which extracts characteristic strings from the seed text, wherein:

the characteristic string extraction module extracts characteristic strings also from each block of the object document,

the similarity calculation module calculates the similarity of each block by comparing the characteristic strings extracted from the block with the characteristic strings extracted from the seed text, and

the inclusion degree calculation module regards each block as a relevant block ~~if in response to the similarity of the block is being~~ higher than a preset value and the full-text search condition relevancy of the block ~~is being~~ higher than a preset value, counts the number of the relevant blocks included in the object document, and calculates the inclusion degree of the object document by use of the counted number of relevant blocks and the total number of blocks included in the object document.

16. (currently amended) A relevant document search device for finding a relevant document from object documents as previously registered search objects, comprising:

a partitioning module which partitions the object document into a plurality of blocks;

U.S. Application No. 10/671,718

a characteristic string extraction module which extracts characteristic strings from each block of the object document;

a block characteristic string storage module which stores the extracted characteristic strings associating them with each block;

a seed text acquisition module which acquires a seed text as a search condition;

a similarity calculation module which calculates similarity of each block of the object document to the seed text and judges whether or not the calculated similarity satisfies a predetermined condition;

an inclusion degree calculation module which calculates a similarity of the object document as a whole to the seed text, based on the calculated similarity of each block to the seed text; and calculates, as an inclusion degree, a ratio of blocks that are judged as satisfying the predetermined condition to the whole of the plurality of blocks of the object document; and

an output module which outputs a list of information of object documents in association with the inclusion degree of each listed document and with the similarity of each listed object document as a whole to the seed text.

17. (canceled)

18. (currently amended) A program for letting a document search system execute a process for finding a document relevant to a search condition from object documents as search objects, wherein the process comprises the steps of:

acquiring a seed text as the search condition;

partitioning the object document into a plurality of blocks;

U.S. Application No. 10/671,718

calculating similarity of each block of the object document to the acquired seed text;

judging whether or not the calculated similarity of each block satisfies a first predetermined condition;

calculating a similarity of the object document as a whole to the seed text, based on the calculated similarity of each block to the seed text;

calculating, as an inclusion degree, a ratio of blocks that are judged as satisfying said first predetermined condition to the whole of the plurality of blocks of the object document; and

outputting a list of information of object documents in association with the inclusion degree of each listed object and with the similarity of each listed object document as a whole to the seed text.

19. (previously presented) The program according to claim 18, wherein the process further comprises the steps of:

analyzing a full-text search condition to be used for a full-text search of the object documents; and

calculating, as a full-text search condition relevancy, a ratio of a number of relevant min terms satisfied by characteristic strings of said each block to a number of total min terms included in the full-text search condition, wherein:

the inclusion degree calculation step judges whether or not the calculated similarity satisfies the first predetermined condition and whether or not the calculated full-text search condition relevancy satisfies a second predetermined condition, and calculates, as the inclusion degree, a ratio of blocks that are judged to satisfy the first and second predetermined conditions to the whole of the object document.

U.S. Application No. 10/671,718

20. (canceled)